had Dr. DOMIN had a longer experience with our ferns, and observed the great diversity of their form and growth, he would have realized that some of his new kinds were but growths of well known species."

Nearly 70 years of experience with plants in the field, much of it with Queensland plants, add to the weight of BAILEY'S comments. At the time of DOMIN'S visit, the present reviewer was collecting morphological material in Queensland, and can heartily agree with the remarks regarding the variability of *Psilotum*, *Marattia*, and *Platycerium*. In *Platycerium*, particularly, the appearance of the plant is so affected by its position on the tree, that isolated plants might be described as new species, if the differences were not so obviously due, in some cases, to merely mechanical causes.—C. J. CHAMBERLAIN.

A new seed genus.—Miss BENSON[20] has made *Conostoma ovale* Williamson the basis of a new form genus, which she calls *Sphaerostoma*. Along with *C. ovale* the doubtful species *C. intermedium* is included as *S. ovale*. In general structure the seed resembles *Lagenostoma*, and is found most frequently without its cupule (or outer integument), from which it doubtless separated when dropped. All of the epidermal cells of the integument are papillate, and at the apex, where the integument is free from the nucellus, they become so elongated as to form a whorl of epidermal crests, the "canopy" being 8-lobed. These crests Miss BENSON calls "frills."

The structure of the lagenostome, however, is quite peculiar. There is the usual central column of nucellar tissue, surrounded by the moatlike pollen chamber which is invested by the epidermis of the nucellus. But the roof of the pollen chamber is modified into what Miss BENSON regards as "an elastically acting mechanism" which definitely closes the pollen chamber after there has been a dehiscence which admits the pollen grains. This elastic mechanism, forming the roof of the pollen chamber, is the epidermis so modified as to resemble in appearance a multiseriate annulus. The conclusion is that in dehiscence this mechanism straightens elastically, admits pollen grains, and then closes the chamber again.

The seeds are provisionally referred to *Heterangium Grievii* on what seems to be excellent evidence, namely constant association, suggestions of actual continuity of ovules with the parent plant, and the evident morphological relationship to *Lagenostoma*.—J. M. C.

Culture of Opuntia.—GRIFFITHS[21] records some very interesting observations upon the behavior of certain species of *Opuntia* under culture. The plants were grown at the government stations at Brownsville and San Antonio,

[20] BENSON, MARGARET J., *Sphaerostoma ovale* (*Conostoma ovale* et *intermedium* Williamson), a Lower Carboniferous ovule from Pettycur, Fifeshire, Scotland. Trans. Roy. Soc. Edinburgh **50**:1–15. *figs.* 3. *pls.* 1, 2. 1914.

[21] GRIFFITHS, D., Behavior, under cultural conditions, of species of Cacti known as *Opuntia*. U.S. Dept. Agr., Bur. Pl. Ind., Bull. no. 31. pp. 24. *pls.* 1–8. *fig.* 1. 1913.